PFAS Background and Action Plan

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EPA United States Environmental Protection Agency

What are PFAS?

- Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that have been in use since the 1940s.
- There are many PFAS chemicals, including the chemicals perfluorooctanoic acid (PFOA), perfluorooctane sulfonate (PFOS), and GenX chemicals (HFPO dimer acid and its potassium salt).

What are PFAS?

- Due to their strong carbon-fluorine bonds, many PFAS can be very persistent in the environment with degradation periods of years, decades, or longer under natural conditions.

- Two of the most studied PFAS are Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS).

Where are PFAS found?

- PFAS are (or have been) found in a wide array of consumer products like cookware, food packaging, and stain and water repellants used in fabrics, carpets and outerwear.
- PFAS manufacturing and processing facilities, and airports and military installations that use firefighting foams which contain PFAS.

How can this impact people?

- Because of their widespread use and environmental persistence, most people have been exposed to PFAS chemicals.
- Some PFAS chemicals can accumulate and can stay in the human body for long periods of time.
- There is evidence that exposure to certain PFAS may lead to adverse health effects.

EPA's Previous Work on PFAS

- Certain PFAS chemicals are no longer manufactured in the United States as a result of the EPA's PFOA Stewardship Program. All companies met the PFOA Stewardship Program goals by 2015.
- Issued various significant new use rules (SNURs).
- Monitored for six PFAS chemicals under the Safe Drinking Water Act to understand the nationwide occurrence of these chemicals in our drinking water systems.
- Issued drinking water lifetime health advisories for PFOA and PFOS of 70 parts per trillion individually or combined.

EPA's Previous Work on PFAS

- Working to advance research on other PFAS chemicals to better understand their health impacts, exposure pathways, options for treatment and removal
- Released draft toxicity assessments for GenX chemicals and PFBS
- Announced the initiation of assessments for five additional PFAS (PFBA, PFHxS, PFHxA, PFNA, PFDA) via the EPA's IRIS Program.
- Issued enforcement orders, provided oversight for federal agency cleanups and assisted state enforcement actions
- Provided technical assistance related to dozens of areas of PFAS contamination around the country.

Action Plan Background

- EPA convened a two-day National Leadership Summit on PFAS in Washington, D.C.
- Following the Summit, the agency hosted a series of visits during the summer of 2018 in communities directly impacted by PFAS where EPA interacted with more than 1,000 people.
- The EPA's PFAS Action Plan was developed based on feedback from these events in addition to information received from approximately 120,000 comments submitted to the public docket.

Action Plan Purpose

- Provides EPA's first multi-media, multi-program, national research, management and risk communication plan to address a challenge like PFAS.
- Responds to the extensive public input the agency has received over the past year during the PFAS National Leadership Summit, multiple community engagements, and through the public docket.
- As a result of this unprecedented outreach, the Action Plan provides the necessary tools to assist states, tribes, and communities in addressing PFAS.

Highlighted Actions

Drinking Water

- The EPA is committed to following the MCL rulemaking process as established by SDWA.
- As a next step, EPA will propose a regulatory determination for PFOA and PFOS by the end of this year.
- The Agency is also gathering and evaluating information to determine if regulation is appropriate for other chemicals in the PFAS family.

Highlighted Actions

Cleanup

- The EPA will facilitate cleanup efforts by providing groundwater cleanup recommendations.
- The EPA is initiating the regulatory development process for listing certain PFAS as hazardous substances.

Highlighted Actions

Monitoring

- The EPA will propose nationwide drinking water monitoring for PFAS under the next UCMR monitoring cycle.

Research

- The EPA is rapidly expanding the scientific foundation for understanding and managing risk from PFAS.
- This research is organized around understanding toxicity, understanding exposure, assessing risk, and identifying effective treatment and remediation actions.

Highlighted Actions

Toxics

- The EPA is considering the addition of PFAS chemicals to the Toxics Release Inventory
- EPA is issuing a supplemental proposal to a Significant New Use Rule to require EPA review before certain PFAS chemicals and uses that have ceased can begin.

Highlighted Actions

Enforcement

- The EPA uses enforcement tools, when appropriate, to address PFAS exposure in the environment and assist states in enforcement activities.

Risk Communications

- The EPA will work collaboratively to develop a risk communication toolbox that includes multi-media materials and messaging for federal, state, tribal, and local partners to use with the public.

Action Plan Next Steps

- To implement the plan, the EPA will continue to work in close coordination with multiple entities, including other federal agencies, states, tribes, local governments, water utilities, industry, and the public.
- The EPA will provide updates on actions outlined in the plan on the Agency's website.

OCSPP PFAS Work

- 1,223 PFAS chemicals have been identified as being on the TSCA Inventory historically.
- 602 of those PFAS chemicals have been reported as active in commerce, the remaining 621 are listed as inactive in commerce.
- 551 (45%) of the total number and 347 (58%) of the Active PFAS Chemicals have been reviewed by EPA's New Chemicals Program in a commenced Premanufacture Notice.
- As with all new chemicals, EPA reviews alternatives to long-chain PFAS chemicals to determine potential health and environmental effects, make an affirmative determination on the risks, and take actions necessary to eliminate those risks, as appropriate.
- Beginning around 2000, EPA reviewed approximately 300 PFAS 'alternatives to long-chain PFAS' and regulated about 200 through a combination of TSCA §5(e) Consent Orders to require testing while allowing production and use with control measures, where appropriate, and new chemical Significant New Use Rule (SNURs).

OPPT PFAS Work

- Consent orders can contain some of the following requirements as conditions:
  - Testing for toxicity or environmental fate once a certain production volume or time period is reached
  - Hazard communication language
  - Distribution and use restrictions
  - Restrictions on releases to water, air and/or land, and Recordkeeping.
- SNURS under TSCA to require manufacturers (including importers) and processors of some PFAS chemicals to notify EPA at least 90 days before starting or resuming new uses of these chemicals.
- This notification requires the EPA to review the new use, make a risk determination, and take appropriate regulatory action based on that risk determination.
- In 2015, the EPA proposed the most recent SNUR to complement the long-chain PFAS phaseout under the 2010/2015 PFOA Stewardship Program. EPA is considering the public comments received as well as the new statutory requirements of the Frank R. Lautenberg Chemical Safety for the 21st Century Act as it works to issue a supplemental proposed SNUR for the import of certain long-chain PFAS as part of categories of certain articles.

OCSPP PFAS Work

Toxics Release Inventory (TRI)

- The TRI tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Specifically, through annual reporting, it provides information about listed toxic chemical releases and related pollution prevention activities by covered industrial and federal facilities.
- TRI data support informed decision-making by communities, government agencies, companies, and others.
- In considering listing a chemical on the TRI, the EPA must determine whether data and information are available to fulfil the statutory listing criteria. In making such listing decisions, EPA also considers the extent and utility of the data that would be gathered.
- The process for listing PFAS chemicals on the TRI would include notice and comment rulemaking.

ORD Research for Agriculture and Rural Economies

- On February 27, 2019, EPA Administrator Andrew Wheeler highlighted the need for quality scientific research specifically on best practices for managing PFAS contaminated well/irrigation water and soil systems common in rural America.
- ORD, in coordination with USDA and other Federal Partners, will direct existing funds immediately towards research projects that will generate practical and actionable science to help manage PFAS chemical issues impacting agriculture and rural economies.